

the scope of the claims, and many alternatives, modifications, and variations will be apparent to those skilled in the art.

What is claimed is:

1. An apparatus for verifying repeatability of a spectroscopy that irradiates light to a user sample, detects light reflected from the user sample, and measures spectrum data of the user sample, the apparatus comprising:

a processor configured to verify a repeatability of the spectrum data, measured by the spectroscopy, based on repeatability verification criteria, and to control the spectroscopy whether or not to remeasure the spectrum data, based on a verification result of the repeatability of the spectrum data.

2. The apparatus of claim 1, wherein the repeatability verification criteria comprise at least one among a similarity verification, a difference verification, and a statistical verification.

3. The apparatus of claim 2, wherein the repeatability verification criteria comprises the similarity verification, and the processor is configured to calculate a degree of similarity between a plurality of spectrum data, measured by the spectroscopy, by using at least one among Pearson correlation, Kendall correlation, and Spearman correlation, and verify the repeatability of the plurality of spectrum data based on the calculated degree of similarity.

4. The apparatus of claim 2, wherein the repeatability verification criteria comprises the difference verification, and

the processor is configured to calculate a degree of difference between a plurality of spectrum data, measured by the spectroscopy, by using at least one among Euclidean distance, Manhattan distance, and Hamming distance, and verify the repeatability of the plurality of spectrum data based on the calculated degree of difference.

5. The apparatus of claim 2, wherein the repeatability verification criteria comprises the statistical verification, and the processor is configured to calculate statistical data of a plurality of spectrum data, measured by the spectroscopy, by using a statistical technique that includes at least one among a paired T-test and a paired Z-test, and verify the repeatability of the plurality of spectrum data based on the calculated statistical data.

6. The apparatus of claim 2, wherein the processor is configured to verify repeatability of currently measured spectrum data based on the repeatability verification criteria by using at least one from values of mean values and median values of the spectrum data that has been previously measured by the spectroscopy.

7. The apparatus of claim 1, wherein the processor is configured to:

in response to the spectrum data having failed to pass the repeatability verification, control the spectroscopy to remeasure the spectrum data; and

in response to the spectrum data having passed the repeatability verification, control an apparatus for analyzing spectrum data to analyze the measured spectrum data.

8. The apparatus of claim 7, wherein the processor is configured to control the spectroscopy by determining a number of remeasurement times, or control the apparatus for analyzing spectrum data by determining the spectrum data to

be analyzed, based on at least one among a number of spectrum data having passed the repeatability verification, a rate thereof, and a number of times that each spectrum data has failed to pass the repeatability verification.

9. An apparatus for analyzing spectrum data, the apparatus comprising:

a spectroscopy unit, which comprises a light source that irradiates a light to a user sample, a detector that detects light reflected from the user sample, and a spectrum acquirer that acquires spectrum data from the detected light; and

a processor configured to verify repeatability of the acquired spectrum data based on repeatability verification criteria, and generate user sample analysis information by analyzing at least a part of the acquired spectrum data based on a verification result of the repeatability of the acquired spectrum data.

10. The apparatus of claim 9, wherein the repeatability verification criteria comprise at least one among a similarity verification, a difference verification, and a statistical verification.

11. The apparatus of claim 9, wherein, based on the verification result, the processor is configured to control the spectroscopy unit to remeasure the spectrum data, or control the processor to analyze at least a part of a plurality of spectrum data acquired by the spectroscopy unit.

12. The apparatus of claim 11, wherein the processor is configured to generate the user sample analysis information by determining spectrum data to be analyzed, based on at least one among a number of spectrum data having passed the repeatability verification, a rate thereof, and a number of times that each spectrum data has failed to pass the repeatability verification.

13. The apparatus of claim 12, wherein the processor is configured to verify the repeatability of the acquired spectrum data by calculating at least one from values of mean values, median values, maximum values, and minimum values of the spectrum data that is determined to be analyzed.

14. The apparatus of claim 9, further comprising:

an output unit configured to provide the generated user sample analysis information to a user.

15. A method of verifying repeatability of a spectroscopy that irradiates light to a user sample, detects light reflected from the user sample, and measures spectrum data of the user sample, the method comprising:

verifying repeatability of the spectrum data, measured by the spectroscopy, based on repeatability verification criteria; and

controlling the spectroscopy whether or not to remeasure the spectrum data, based on the verifying.

16. The method of claim 15, wherein the repeatability verification criteria comprise at least one among a similarity verification, a difference verification, and a statistical verification.

17. The method of claim 16, wherein the verifying the repeatability of spectrum data comprises:

verifying the repeatability of currently measured spectrum data based on the repeatability verification criteria by using at least one from values of mean values and median values of the spectrum data that has been previously measured by the spectroscopy.

18. The method of claim 15, wherein the controlling the spectroscopy comprises: